



## Case Report

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### MANAGEMENT OF MUTRAKRUCHHA BY MUTRAMARGAGATA UTTARBASTI WITH SPECIAL REFERENCE TO RECURRENT UTI: A CASE REPORT

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#### ABSTRACT

In Ayurveda, Basti (Urinary Bladder) has been mentioned as one of the Trimarma (Vital Points) and Moola (Base) of the Mutravaha Srotas (Urinary Channels). The word Mutrakruchha basically means Kruchha Pravriti of Mutra i.e. difficulty in passage of urine. It has been described as a separate Roga in Mutrakruchha Prakarana as well as Lakshana of other diseases in Ayurvedic texts. The symptoms of Pittaj Mutrakruchha are Peetam (passage of yellowish discoloured urine), Saraktam (sometimes blood mixed), Sadaham (present with burning), Kruchha Mutra (dysuria) and Muhurmutra (increased frequency of micturition). These symptoms lie in close proximity to Urinary Tract Infection. In Panchkarma, Basti Chikitsa has been mentioned as an excellent treatment for Mutrakruchha. In this Case Report, a 39-year-old female patient having symptoms of UTI such as burning micturition, increased frequency of micturition and dysuria for 2-3 years diagnosed as a case of recurrent UTI was managed with Uttarbasti with Balaashwagandha oil. Aims and Objectives: To study the effect of Mutramargagata (Urethral) Uttarbasti in case of Mutrakruchha. Methodology: The patient was clinically assessed and Mutramargagata Uttarbasti was done with Balaashwagandha oil for a period of five days. The assessment of improvement in symptoms was made on subjective and objective criteria and compared before and after treatment. Result and Discussion: The assessment was done before and after the procedure and significant improvement was noticed symptomatically and statistically. The results have been mentioned in tabulated form before and after treatment. Conclusion: Uttarbasti is a safe, cost effective, non-invasive and highly effective procedure of combating Recurrent UTIs.

**Keywords:** Mutrakruchha, Recurrent UTI, Uttarbasti, Mutravaha Srotas

#### INTRODUCTION

In Ayurvedic texts, Mutrashaya (Bladder) is described as the base of the Mala (Waste products of human body) and also the supreme site of Prana (Vitality)<sup>1</sup>. Mutrakruchha has been mentioned as Vegaavrodhjanya Vyadhi (Suppression of urges)<sup>2</sup>. The etiology of Mutravaha Srotodushti (vitiation of Urinary tract) is doing various activities while suppressing urine urge such as drinking water, eating meals, indulging in sexual intercourse and others are emaciation of body and trauma to the Urinary passage<sup>3</sup>. The symptoms of Mutravaha Srotodushti include increased frequency of urination, passing of small amounts of urine each time, Cloudy urine, dysuria, passing of dense thick urine<sup>4</sup>. The etiology of Mutrakruchha is excessive physical exertion, continual use of dry wine, strong medications, intercourse, mounting fast horses, ingestion of the flesh of wet- land creatures & fishes, taking pre-digestion meals and owing to indigestion<sup>5</sup>.

The Samprapti (Pathogenesis) is the Tridoshas Vata, Pitta and Kapha get vitiated due to their own cause and produces pathology in the urinary tract or the urinary bladder<sup>6</sup>. The symptoms of UTI resemble with those of Pittaj mutrakruchha which include passage of yellowish discoloured, sometimes blood mixed, present with burning and dysuria.

#### Types of Mutrakruchha:

Acharya Charaka and Sushruta has described 8 and Acharya Vagbhata has described 4 types of Mutrakruchha

<b>Charaka</b>	1. Vataja 2. Pittaja 3. Kaphaja 4. Sannipataja 5. Ashmarija 6. Raktaja 7. Shukraja 8. Sharkarajanya
<b>Sushruta</b>	1. Vataja 2. Pittaja 3. Kaphaja 4. Sannipataja 5. Abhigataja 6. Shakrita 7. Ashmarija 8. Sharkaraj
<b>Vaghbata</b>	1. Vataja 2. Pittaja 3. Kaphaja 4. Sannipataja

Basti has been mentioned in the treatment of Pittaja Mutrakruchha.

Urinary Tract Infection is defined as the multiplication of the organisms in the Urinary Tract. The term UTI covers Urethritis and Cystitis. Urinary Tract Infection is the most common bacterial infection of the urinary tract. It is commoner in females as compared to males due to shorter urethra and absence of prostatic secretions, which is more susceptible to infections. Upto 50% of women have UTI at some time of their life. Recurrent UTIs are defined as at least three episodes of a UTI in twelve months, or at least two episodes in six months.

It is usually associated with the presence of  $>10^5$  microorganisms in urine. Most common causative organism is *Escherichia coli*. Others which may cause UTI are *Proteus*, *Streptococci*,

*Staphlococcus* etc. UTI may include symptoms such as dysuria, burning micturition, pain lower abdomen, increased frequency of urination, scanty amount of urine passages each time, haematuria and foul-smelling turbid urine<sup>7</sup>.

Panchkarma delivers promising treatment for Mutrakruchha (Urinary Tract Infections) called Uttarbasti which denotes basti given either into the Mutramarga (Urethra) or Yonimarga (Cervical canal). The classification of the Uttarbasti is Mutrashayagata and Garbhashayagata. Here in this particular case Mutramargagata (Urethral) Uttarbasti has been used to treat Mutrakruchha. The recommended dosage of Sneha (oil/Ghrita) for Mutramargagata (intraurethral) Uttarbasti in adult woman is 1 Pala (.50 ml) and in girls is 2 Karsha (~20-25ml)<sup>8</sup>. It is a method of instilling medicine directly into the Urinary Bladder and hence providing maximum benefit in minimum duration of time. Systemic therapy is lesser effective as compared to the Mutramargagata (intraurethral) therapy in the disease of Urinary bladder. This is either due to metabolic loss or poor absorption. This loss can be minimised by instillation of the required drug at the target site.

## CASE REPORT

A 39 years female patient, a homemaker approached Rajiv Gandhi Govt. Post Graduate Ayurvedic Hospital, Paprola with C/o Burning micturition with increased frequency of micturition along with pain in lower abdomen. The act of micturition was accompanied with pain, urgency and nausea. Due to these problems patient had to go to washroom many times during night time and her sleep was interrupted. The intensity of symptoms was increased during night time and were decreased during daytime. The patient felt weakness and was unable to do her household work properly during this course of her illness.

**Chief Complaints:** Burning micturition with increased frequency, urgency, nausea and pain lower abdomen since, 2-3 years.

**Past History:** On history taking, the patient revealed that she has been suffering from symptoms of recurrent UTI on and off since 2 to 3 years. No history of Hypertension, Diabetes Mellitus, Thyroid Dysfunction, Tuberculosis or any other Chronic illness.

**Family History:** No Relevant Family history

### Personal History

Appetite: Normal

Thirst: Normal

Micturition: Burning micturition, Increased frequency and Urgency

Bowel: Occasional Constipation

Sleep: Disturbed

Prakriti: Pitta Vataj

Agni (Metabolic Fire): Samagni

Koshta (Digestive capacity): Madhyam

### Menstrual history

Duration: 2-3 days

Interval: 28-30 days

Amount: 1-2 pads per day

Pain: Absent

Clots: Absent

**Obstetric History:** G<sub>6</sub> P<sub>1</sub> L<sub>1</sub> A<sub>5</sub>

**Relevant Past Interventions:** For these complaints patient has earlier taken Allopathic medicine and had investigations such as Ultrasound, Culture and Sensitivity of Urine Sample. The Ultrasound had no appreciable findings. The Urine Culture report confirmed *Escherichia-coli* infection.

She had taken Allopathic Medication multiple times but she had little relief every time and the symptoms again appeared at short intervals and the symptoms did not cure completely. After suffering a lot, she opted to adopt Ayurvedic Management for her recurrent Infection and thus visited our Institution.

### General Examination

Appearance: Normal

Built: Moderate

Pallor: Absent

Icterus: Absent

Oedema: Absent

Cyanosis: Absent

### Vitals

B.P. – 114/80 mm/hg

P.R. - 82/min.

R.R. – 16/min.

Temp. – Afebrile

### Astasthana Pareeksha (Eightfold Examination)

Nadi (Pulse Rate): 82/min

Mutra (Micturition): 15-20 times/day

Mala (Stool): Badhha Kostha (Constipation)

Jihwa (Tongue): Nirama (Non-coated)

Shabda (Speech): Samanya (Normal)

Sparsha (Touch): Samanya (Normal)

Druk (Eyes): Samanya (Normal)

Akriti (Built): Samanya (Normal)

### Clinical Findings on Physical Examination

On per abdomen examination tenderness was positive on suprapubic region.

### Urine Routine and Microscopic Lab. Examination

Colour: Pale yellow

Appearance: Clear

Ph: 6

Albumin: Absent

Sugar: Absent

RBCs: Absent

Pus cells: 10-11/hpf

Epithelial cells: 5-6/hpf

**Urine microscopic culture report** – Culture isolate *Escherichia. coli* was found.

**USG: Abdominopelvic-** No specific findings in respect to UTI.

### Samprapti Ghataka (Pathogenesis factors) of Mutrakruchha

Nidana (Causative agents) – Vyayam (Exercise), Ushna Teekshan Ruksha Aahar( Hot , spicy, dryfoods), Adhyashana (Eating meals before predigested food), Ajeerna (Indigestion), Abhigata (Trauma)

Dosha (Morbid Factors) – Tridosha Vata Pradhana

Dushya (Affected components of body) – Mutra (Urine), Jala (Water)

Srotas (Channels) – Mutravaha Srotas (Urinary Channels)

Adhishthana (Place of Action) – Basti (Urinary Bladder)

Based on the clinical and physical symptoms the patient was treated with Uttarbasti with Balaashwagandha oil which has been mentioned in Table 2.

The Patient had marked improvement in the symptoms after Uttarbasti as shown in Table 3.

After 5 Sittings of Uttarbasti Procedure, Urine Analysis Reports showed normal values which has been mentioned in Table 4.

### Assessment Criteria

Table 1: Subjective Criteria

Symptom	Severity	Grading
PeetaMutrata (Dark coloured urine)	No cloudiness	0
	Cloudiness present, no visible casts	1
	Cloudiness with casts visible	2
	Dense thick cloudy urine with numerous casts	3
SaraktaMutrata (Haematuria)	No haematuria	0
	Normal colour with few red cells visible microscopically	1
	Reddish or Brown in colour	2
	Frank blood, Haematuria	3
Krichhra Mutrata (Dysuria)	Absent	0
	Mild pain during micturition	1
	Moderate pain during micturition	2
	Severe pain during micturition	3
Sadaha Mutrata (Burning micturition)	No burning micturition	0
	Mild (not a main complaint of patient)	1
	Moderate (Present before and after micturition)	2
	Severe (soreness present throughout the day)	3
Muhurmuhur Mutrata (Frequency per day)	0-5 times	0
	6-10 times	1
	11-15 times	2
	>16 times	3
Ruk (Pain Lower abdomen)	Absent	0
	Mild Pain	1
	Moderate Pain	2
	Severe Pain	3

### Objective Criteria

Pus cells: 10-11 /hpf

Epithelial cells: 5-6/hpf

### Lab Investigations - Urine Routine Lab Investigation

Crystals: Absent

Colour: Pale yellow

Casts: Absent

RBCs: Absent

Table 2: Timeline of the Case (Therapeutic Intervention)

Time period	Description of Symptoms	Interventions and Procedures done
11/02/25(Day 0)	Symptoms of UTI, Burning micturition, night time increased frequency of micturition, pain lower abdomen.	Visited OPD of Prasuti Tantra and Stri Roga and OPD of Panchkarma, Advised Mutra Margagata Uttarbasti with Balaashwagandha oil in <b>dosage of 20 ml. for a duration of five days.</b> IPD Admission in Dept. of Panchkarma
12/02/25(Day 1)	Symptoms of UTI persisted.	Uttarbasti D <sub>1</sub> – 12/02/25 Uttarbasti D <sub>2</sub> – 14/02/25 Uttarbasti D <sub>3</sub> – 16/02/25 Uttarbasti D <sub>4</sub> – 18/02/25 Uttarbasti D <sub>5</sub> – 20/02/25  Procedure: i)After emptying Urinary Bladder, patient was laid on table in lithotomy position and covered with sterile surgical towels. ii)Painting of perineal region with betadine antiseptic solution and Savlon was done. iii)Then well lubricated Foley's catheter no. 12 with lignocaine jelly was inserted into the Urethra. iv)Autoclaved Balaashwagandha oil 20 ml was pushed which was retained for 15 minutes. v) Hot water fomentation over abdomen was given. vi) Patient was told to rest for about half an hour on same table.
20/02/25 (Day 9)	Patient had significant improvement in symptoms like, Burning Micturition, Night time increased frequency of Urination and Pain Abdomen reduced.	Discharged
20/03/25 (Day 39)	1 <sup>st</sup> Follow Up Patient Improved statistically and symptomatically.	Diet and lifestyle modification explained.

### Preventive and Self Care Intervention

Diet and Lifestyle Modification Advised

1. Normal Homemade food. Avoid excessive Salty, Spicy and Sour food.
2. Drink plenty of liquids orally.

3. Avoid excessive strenuous activities, Avoid Stress.

4. Maintain proper local Hygiene.

5. Regular Meditation.

6. Pelvic Floor Exercises Advised.

## RESULTS AND DISCUSSION

Table 3: After completion of the treatment

Symptoms	BT	AT	Follow Up
PeetaMutrata (Dark coloured urine)	1	0	0
SaraktaMutrata (Haematuria)	0	0	0
Krichhra Mutrata (Dysuria)	2	0	0
Sadaha Mutrata (Burning micturition)	2	1	0
Muhur Muhur Mutrata (Frequency per day)	3	1	0
Ruk (Pain Lower abdomen)	2	0	0

BT: Before Treatment, AT: After Treatment

Table 4: Urine Analysis Before and After Uttarbasti

Urine Analysis	BT	AT
Reaction	Acidic	Acidic
Albumin	Absent	Absent
Sugar	Absent	Absent
Pus Cells	10-11/hpf	1-2/hpf
Epithelial cells	5-6/hpf	1-2/hpf

BT: Before Treatment, AT: After Treatment

Mutrakruchha has been mentioned amongst the diseases that can affect Basti (Urinary Bladder and the Urinary tract). The patient with Pittaja Mutrakruchha presents with passage of dark yellow urine, sometimes blood mixed urine, dysuria, burning micturition, pain lower abdomen, increased frequency of micturition and with urgency. Basti is the moola of the Mutravaha Strotas. In all kinds of Basti Roga (Diseases pertaining to Urinary bladder) or the diseases of the Mutravaha Strotas (Urinary Channels), Basti chikitsa (Treatment) and Uttarbasti have been mentioned as the line of treatment<sup>9</sup>. Further Basti (Urinary Bladder) is also mentioned as the seat of Apana Vayu. Apana Vayu acts by its property of Chala (Movement) guna in the excretion of the waste products of metabolism, Mutra (Urine) being one of them. The Vikriti (dysfunction) of the Apana Vayu causes serious pathologies in the Bladder<sup>10</sup>. Mutrakruchha has also been mentioned in the Mutravegavrodh janya vikara (Diseases due to suppression of urges). Administration of fatty substances in form of oil or Ghritta or decoction into Urethral orifice or vagina is called Uttarbasti. Here a patient of UTI has been successfully treated with Mutramargagata Uttarbasti with Balaashwagandha oil for 5 days.

Urinary tract disease is possibly recurrent in women due to shorter length of the urethra. The systemic treatment has limitations in curing the disease due to possible metabolic loss or due to poor absorption. Thus, to achieve maximum therapeutic benefit and to avoid this loss, drug is administered on the site i.e. Basti (bladder) which gives maximum, instant and long-lasting benefits of the drug. This explains the possible strength of the procedure Uttarbasti in the treatment of Pittaja Mutrakruchha. On the other side a possible limitation of the procedure is the high impermeability of the Bladder epithelium. Thus, the procedure has to be repeated to increase the contact between bladder and the drug in order to achieve significant results. Intravesical drug delivery is the method of delivering drug into the Basti via Uttarbasti which gives maximum therapeutic benefit. The inner layer of Urinary bladder is the most impermeable barrier in the body. Passive diffusion is the sole driving force available for intravesical drug absorption.

The transitional epithelium of the Urinary Bladder is impermeable to all the irritants present in Urine. The inner layer of the urinary bladder, the urothelium serves as BPB (Bladder Permeability Barrier). The Urothelium is composed of three types of cells named basal cells, intermediate cells and Umbrella cells.

The barrier function of the Umbrella cells is established by arrangement of uroplakins, tight junctional protein and is further enhanced by a mucin layer composed of GAG (Glycosaminoglycans). The GAG layer is hydrophilic and forms an aqueous layer on the Umbrella cells. Urothelium serves finite passive permeability through transcellular (i.e. through the cells) and paracellular pathways (i.e. through tight junctions and lateral intercellular spaces) which causes possible absorption of the drug into the bladder<sup>11</sup>.

Recurrent UTI is compared to Pittaja Mutrakruchha. As Basti has been mentioned as the Sthana (place) of Vata so instillation of oil into Basti (Urinary bladder) pacifies Vata<sup>12</sup>.

Balaashwagandha oil used for Uttarbasti has major ingredients such as:

**Bala** (*Sida cordifolia*) is Sheeta virya (Cold potency) and has Madhur rasa(sweet), is Mutrala (Urine producing) and indicated in Mutrakruchha. **Ashwagandha** (*Withania somnifera*) is Madhur vipaki (Sweet metabolic property), is Mutrala (Urine producing) and has Madhur Tikta Rasa (Sweet pungent taste). It is Shothahar(anti-inflammatory) and Vednasthapana(analgesic). **Rasna** (*Alpinia calcarata*), is Vednasthapana and Shothahar. **Chandana** (*Santalum album*) is Sheeta virya and Madhur Tikta in Ras. It is Dahprashmana (alleviation of heat), Pittashamak, Mutrajanana (Urine producing) and indicated in Bastishotha (inflammation of Bladder). **Manjishta** (*Rubia cordifolia*) has Madhura(sweet), Tikta(pungent) and Kashaya(astringent) Ras. It is Shothahar. **Durva** (*Cynodon dactylon*) is Sheeta virya and has Madhur Kashaya Ras. It is Mutrala (urine producing) and indicated in Mutrakruchha. **Madhukam** (*Glycyrrhiza glabra*) is Sheeta virya, has Madhur Kashaya Ras. It is Mutrala and indicated in Mutrakruchha. **Kumudam** (*Nymphaea alba*) It is Dahaprashtama, Sheeta virya has Madhur, Tikta and Kashaya ras<sup>13</sup>.

The main ingredients of Balaashwagandha oil are collectively Sheeta virya (Cold potency), Pittashamak Shothahar(anti-inflammatory) and Mutrala (Urine producing) which explains its action in alleviation of the symptoms of Mutrakruchha. Uttarbasti with Balaashwagandha oil has proven to pacify Vata as well as Pitta which are main Doshas (Morbid Factor) in Samprapti (Pathogenesis) of Pittaja Mutrakruchha.

## CONCLUSION

Uttarbasti is a non-invasive procedure and can be done with minimal requirements. It is an effective alternative to modern medicine and other modern procedures. The patient of Pittaja Mutrakruchha w.s.r. to recurrent UTI has significantly improved symptomatically and statistically through Uttarbasti. The strength of the therapeutic approach of treating Mutrakruchha here in this case report is that Uttarbasti has proven a boon to the ailing patient as she had not been relieved to such an extent by any of the treatments or medications that she had been using since 2 to 3 years. No adverse drug reactions or anticipated events were noticed during and after the procedure. Thus, it can be concluded that Uttarbasti is a very effective method to cure Mutrakruchha.

## Consent and Ethical Statement

The study is carried out as per international conference of Harmonization-Good Clinical Practices Guidelines (ICH-GCP) or as per ICMR National Ethical Guidelines for Biomedical and Health Research Involving Human Participants.

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